

REMARKS

Claims 1, 3, 5, 6, 8 – 13, and 15 are pending and under consideration in the above-identified application.

In the Office Action, Claims 1, 3, 5, 6, 8 – 13, and 15 were rejected.

In this Amendment, Claims 1, 3, 5, 6, 8 – 13, and 15 are amended, Claims 2, 4, 7, and 14 are cancelled.

Accordingly, Claims 1, 3, 5, 6, 8 – 13, and 15 are now at issue.

I. Specification

Applicants have corrected a typographical error in the Specification, namely on page 22 line 24, to conform the disclosure to the figure being described, namely Fig. 19. No new matter has been introduced as a result of this amendment.

II. Priority Claim

Applicants are hereby providing a certified copy of JP2002-304990 filed on October 18, 2002 as required by 35 U.S.C. 119(b) in order to claim priority benefits for the instant patent application.

III. Objection to Claims 3 and 15

Applicants have appropriately amended Claims 3 and 15 as required by the Examiner.

Accordingly, Applicants respectfully request that these claim rejections be withdrawn.

IV. 35 U.S.C. § 112 Rejection of Claims

Claims 3 and 5 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

Applicants have appropriately amended Claims 3 and 5, and respectfully request that these claim rejections be withdrawn.

V. 35 U.S.C. § 103 Obviousness Rejection of Claims

Claims 1-6 and 8-15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Rovner (U.S. Patent No. 3,825,823) in view of Fragola et al. ("Fragola") (U.S. 2,389,146) and Yamada et al. ("Yamada") (U.S. Patent No. 6,407,547). Although, Applicants traverse these rejections, Claims 1 and 15 have been amended to clarify the invention and remove any ambiguities that may have been the basis for these rejections.

Claim 1 is directed to a magnetic azimuth measurement apparatus. The magnetic azimuth measurement apparatus comprises a magnetic detection unit, a sampling unit, a condition determining unit, a condition determining unit, and an azimuth information output unit.

Amended Claim 1 recites that each one of the two or more magnetic detection devices of the magnetic detection unit comprises a thin film magnetic core, a thin film excitation coil and a thin film detection coil around the magnetic core, and the two or more magnetic detection devices disposed in a wheel-spoke arrangement with their cores positioned to point along their respective axes from a common point. This amendment finds support on page 22, lines 24 – 29 of the Specification and Figure 19.

The Examiner states that Fragola does teach a segmented flux valve, with each segment comprising a core, an exciting coil and a detection coil oriented in a radial pattern. Fragola teaches that these segments form a polygon, having as many sides as magnetic detection units. Thus, in Fragola the cores of the magnetic detection units are disposed along the periphery of the formed polygon rather than in a wheel-spoke arrangement.

Hence, Applicants submit that none of the cited references, Rovner, Fragola and Yamada, teach or disclose a magnetic azimuth measurement apparatus with the magnetic detection devices disposed in a wheel-spoke arrangement with their cores positioned to point along their respective axes from a common point.

Accordingly, Claim 1 is patentable over Rovner, Fragola and Yamada et al., taken singly or in combination with each other, as are dependent Claims 3, 5, 6, and 8 – 13 for at least the same reasons.

Independent Claim 15 has been amended to recite the same distinguishing feature as that of Claim 1. Thus, Claim 15 is also patentable over Rovner, Fragola and Yamada et al., taken singly or in combination with each other.

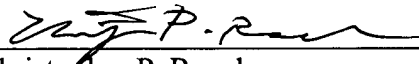
Applicants respectfully request that the claim rejection under 35 U.S.C. § 103 be withdrawn.

VI. Conclusion

In view of the above amendments and remarks, Applicant submits that Claims 1, 3, 5, 6, 8 – 13, and 15 are clearly allowable over the cited prior art, and respectfully requests early and favorable notification to that effect.

Respectfully submitted,

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